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ABSTRACT

The thesis of this paper is that television can effectively disseminate information to adult learners, thereby freeing the instructor from repetitive tasks and allowing him to assume a facilitative, diagnostic, and consultative role for larger numbers of adult students on an individualized basis. Research data and an example of a mediated individualized study course from the authors' institution are used to indicate that television can be used in a non-dehumanizing way, while holding constant or improving academic achievement and student attitudes. (Author/STS)

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New Strategies In Adult Education: Using Television To Individualize Instruction

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Introduction

Instructional television is obviously not a "new" idea or strategy. In its most common application, the medium conjures up visions of hundreds, or even thousands, of students busily copying similar notes from identical images on scores of television screens. The vision is one of electronic centralization and depersonalization run rampant. Indeed, one of the primary retardants of television as an instructional tool has been the widely held belief that it dehumanizes education by removing the essential individual contact between student and teacher. While contact may sometimes be lessened, we have found in experiments at the Rochester Institute of Technology that dehumanization does not necessarily follow. Educational theorist Mark Hopkins on one end of the log and the student on the other remain central, but often television can relieve the teacher so that he can spend time on other logs with additional students.

Too often we, as teachers, become overly involved in repeating material each term as new students enter our classrooms. Individual student needs, abilities, and backgrounds are often not considered in the presentation; and course materials become repetitive and even boring to us. Poorer students may not get appropriate remedial guidance, while advanced students are not adequately challenged by this non-participative approach to teaching. Because of the time spent in presentation

of the content, the teacher does not have sufficient time to work individually with students. In short, we become overly-involved in dissemination and under-involved in analysis and synthesis.

The thesis of this paper, therefore, is that television can effectively disseminate information to adult learners, thus relieving the instructor of this often tedious and repetitive task. The instructor is then freed to individualize instruction by assuming a facilitative, diagnostic, and consultative role to relatively large numbers of students on an individualized basis. To support this thesis four basic principles of teaching adults are discussed in their philosophical framework and are supported by research on the developmental needs of adults and by the authors' personal experiences. Research data and an example of a mediated individualized study course on twentieth century United States history from the authors' institution are used to indicate that television can indeed be used in a non-dehumanizing way to facilitate the individualization of instruction while holding constant, or improving, academic achievement and student attitudes.

Why New Strategies?

Historically, the higher education of adult students has been modeled after the higher education of adolescents.[1] Yet, we know from the research and writings of Levinson,[2] Gould,[3] Sheehy,[4] Erickson,[5] Neugarten,[6] Jung,[7] and others that adults are different from adolescents in a number of significant ways. The literature of adult development which these authors represent is not extensive, but it is pervasive. We know, for example, that the motivations, drives, and aspirations which impel adults to pursue higher education are quite different from those of adolescents. We know also that the adult brings a wealth of related experience to most learning situations. Further, we know that

there is great diversity among adults. The thirty-five year old who returns to college for clearly specified professional knowledge essential for job advancement will define a program much differently from the forty-five year old who wonders if the long hours and family sacrifices implicit in an academic regimen are really worth it. Both of these will differ from the twenty-five year old exploring a first career choice, or the thirty year old housewife whose husband thinks she should become more sophisticated, develop more interests, get out more, and define her own career.

In recognition of the great variety of needs and approaches to those needs found in adult students, we have adopted four principles to guide curriculum development. Based on the work of many experimental psychologists--most notably Skinner[8] and more recent syntheses by Dressel and Thompson,[9] and Cross[10]--these principles seem particularly relevant when television is used as a primary component of instruction.

(1) The learner must be active rather than passive. Psychologists have long known that motor activity (muscular movement) directly stimulates the higher mental processes, such as learning.[11] In fact, the greater the number of senses involved, the more effective the learning. This is an especially useful principle in guiding curriculum development for adults who bring to the college a multitude of life experiences on which to base discussions and conduct projects. For instance, in certain writing courses, we have found adults far superior to younger students simply because adults have experienced more and, thus, have more to say. The challenge for instruction is to help adults analyze and synthesize these experiences in terms of the subject matter to be learned. This requires an active process between student and instructor. As a consequence, dissemination of information must occur as efficiently as possi-

ble so that time for activities such as discussion and projects can be maximized. We have found, too, that emphasis upon active involvement in the learning process serves to heighten and sustain the motivation of the busy adult to learn a given body of knowledge.

(2) Effective learning requires feedback and evaluation. This is simply another way of stating the re-enforcement principles that have been the essence of learning psychology.[12] For the adult with concerns other than education, we have found that mid-term and final examinations often do not provide adequate or frequent enough feedback in order to maintain a high level of motivation. From this observation has developed the idea of lesson units smaller than a course. Although enterpretations of "small lesson units" may vary widely from course to course, it is not hard to find general agreement that work covered in a term is too long and complex to be presented without intermediate evaluation and feedback. Because adults are generally teacher-independent, they respond well to positive reinforcement and frequent feedback regarding progress. Motivated adults are often able to correct deficiencies or inappropriate learnings before the threat of a poor final grade becomes reality.

(3) There exist enormous individual differences in rates of learning. For the adult student who, more than likely, is not a regular participant in the academic environment, control of the learning rate, i.e. self-pacing, is desirable. Adults typically enter college after several years absence. As a consequence, study skills are often diminished and time and experience are needed for rebuilding. Additionally, work such as that described by Parry[13] and Belbin[14] generally substantiates that the aging process, past 30, may affect adults differentially and may accentuate further differences in learning rates. As a consequence of these two factors, we have found considerable need

for individual pacing of classroom presentations.

(4) Large numbers of adult learners can benefit from individualized study. Within rather broad parameters, the ability to study individually is not related significantly to intelligence.[15] It would follow, therefore, that individualized study is appropriate for large numbers. There is, however, an even more important consideration. Most of life's decisions involve those processes generally associated with individualized study approaches. As a consequence, the learning of these processes should be a part of everyone's, or nearly everyone's college experience. In a world where total information available to mankind doubles approximately every 18 months, the learning of process, especially how to go about obtaining information to be used in decision-making, may be more important than the learning of content.

With these guidelines in mind, let us turn our attention to some future prospects and present realities.

Future Prospects and Present Realities

At this point we must confess an assumption that we hold about the future: the widespread use of instructional technology is as inevitable as the "Future Shock" that already confronts us. The Carnegie Commission report of 1972, The Fourth Revolution, predicts that by the year 2000 from 10 to 20 per cent of on-campus instruction will be carried on through "informational technology", while in off-campus instruction the levels of its domination may reach as high as 80 per cent.[16] The advent of the videodisc, due for introduction this year and prominently featured recently on the cover of the New York Times Magazine, opens up remarkable possibilities for home instruction.[17]

In introducing courses that make substantial use of instructional

technology, we have found only two principal obstacles: teachers and students! As the Carnegie Commission observed, "instructional technology is not uniformly welcomed by the academic community."[18] We simply acknowle ge briefly at this point that mediated instruction is not for everybody. The indifference or even hostility of many traditional faculty members is well known. The causes of such attitudes are complex and, unfortunately, lie beyond the immediate scope of this paper. It is sufficient to say here that faculty members involved in the development of mediated instruction must be chosen very carefully. Under the best circumstances they should be volunteers and not draftees. They must be flexible, open, and confident enough in their discipline that they can accept without threat the assistance of instructional support services and the inevitable scrutiny of colleagues.

Our experience indicates that the great majority of adult students (at least 80-85% as a rough estimate) can learn successfully through mediated instruction, in particular through television. At the same time we have placed accentuated emphasis on advising so that students know beforehand the kind of course in which they are enrolling. Obviously, the claim of "increased options" that instructional technology legitimately makes is meaningless if students are unaware of choices.

The mass of research on televised instruction and films as opposed to "conventional" teaching was not very helpful to us in the particular project described in this paper. The studies concern totally mediated instruction primarily and are inconclusive, though there is a good deal that is negative.[19] Had we taken the research too seriously we would have probably thrown up our hands in dismay and retreated to our faded lecture notes. In particular, McKeachie's summary of research evidence

on the differences between conventional and television courses indicates that in nonscience courses more than two-thirds of the variables studied favored conventional methodology. Also, the results of Chu and Schramm indicated that instructional television was more appropriate for primary and secondary levels than for college students.[20] In short, our decision to use television to teach history to adults appeared beclouded from the start by research findings.

We believed, nevertheless, that the rich media resources available in twentieth century United States history offered an opportunity to present materials of exceptional quality and dramatic visual impact. The openness of adult learners and their superior motivation and goal orientation[21] caused us to view them as likely prospects for success in our particular project.

"Switched-on Clio" [22]

With apologies both to the Muse of history and Walter Carlos, whose album of electronically synthesized music, "Switched-on Bach," has had great mass appeal, this section of the paper will describe how the four basic principles for individualized education discussed earlier are applied in a single history course, "Modern America: A Mediated, Independent Study."

By way of background, a brief description of the content and organization of the course itself precedes this analysis.[23] In scope the course covers the background and development of America's industrial order (including the "new immigration" and the origins of the modern labor movement); the emergence of modern cities and their problems; civil rights and ethnic relations; the causes and consequences of the Spanish-American War; Progressive reform; World War I; the Twenties and the Great Depression; Franklin Roosevelt and the New Deal; the origins

and development of the cold war; recent presidents, especially Truman and Kennedy; the emerging woman; and "Future Shock."

To help control costs, we determined to use commercially produced materials, particularly documentaries and educational films, when sources of good quality could be located that met our specific curricular needs; when such material was unavailable or was unsatisfactory, we produced videotapes in RIT's Television Center. Ultimately, nearly three-fourths of the course material was purchased from commercial sources and a quarter was "in-house production." Although audiocassettes and sound recordings were among the media included in course materials, the videocassette has been the mainstay of the course. Films are available to the students both in film and videocassette format, and nearly unanimously they have chosen the latter because of the individual control it gives them over pacing. At student request, we have even transferred some material (slide-tapes shows) to videocassette.

One other initial decision was that the course would probably not be totally mediated. The plan was for students to intersperse seminars with the instructor throughout their coursework. "How much media is enough?" we asked; "How much is too much?" Through trial and error, we have discovered that an approximate mix of two-thirds mediated units and one-third classroom seminars is most comfortable for our students and professors. Students complete the independent study in the college Media Resource Center, which is open during the library's regular hours. Students work at their own pace and schedule with the understanding that all required work in a series of units must be completed in time for the next regularly scheduled seminar. Thus, students enjoy what we like to call "structured freedom," having great flexibility, yet knowing when all work is due.

In what ways has "Modern America" implemented our four basic principles of individualized education for adult learners?

(1) Active Learning. Acknowledging that an individual using a videocassette machine is involved in one-way communication, we nevertheless seek learner involvement in a number of ways. Thoughtfully designed syllabus/workbook materials attempt to elicit immediate responses in notetaking from students. Textbook materials are also carefully correlated, and students are sometimes asked to stop the machine and read a particular passage. Each student also has an "encyclopedia" of American history which he can use during a lesson to locate unfamiliar terms, persons, or events. Students are encouraged to view media units with classmates and to discuss materials during and after the tapes. Of course, the professor is available during "regular" class hours, by telephone, or by appointment to respond to questions. When possible, tapes are less than a half-hour's duration so that students may use several tapes in completing any one unit. Students can vary routine also by using other types of media or by completing optional materials in areas of special interest. The periodic seminars are never lectures by the professor but are, instead, a time when he elicits from the students a general sharing of individual workbook/syllabus responses; students know that they may be asked to share with the entire class the notes they make as they work.

(2) Feedback and Evaluation. We have already indicated that seminars are essentially evaluative sessions, conducted in as open and non-threatening a manner as possible. Tests, of course, provide important student feedback. To keep check on student progress and spot problems as quickly as possible, students are asked to complete an evaluation card for every videocassette or other piece of media they use. Student evaluation cards are of great help in course design and development,

and at times the response to student suggestions or criticisms can be immediate. Adults particularly appreciate knowing that evaluation is a two-way process and that they help make changes in the course. For example, "Modern America" was revised significantly and its syllabus reworked in each of the first four quarters of its operation. The freedom that the course instructor has from meeting a regular class schedule and preparing lectures allows time for this kind of curricular change and also provides opportunity for feedback to take the form of one-on-one tutorial instruction.

(3) Control of Learning Rate. Again, we have already indicated that television, particularly by using the videocassette, allows the adult learner to proceed at his own pace and schedule. Conditioned by previous experience to work in class at the professor's rate, students sometimes have to be gently reminded that they now control the work pace. With surprising frequency, students complain that a tape was "too fast," and they are invariably chagrined when asked why they did not stop the tape or play certain portions again. The format of the class, moreover, allows students to return to the material for review or to complete supplementary materials if they have time and interest.

(4) Personalized Learning. The flexible schedule of "Modern America" has proved a boon to adults who find that they must adapt their college study to work requirements that are demanding and sometimes unpredictable. One of the greatest delights in teaching this course is that students rarely "miss" a class. Students who stay late at their jobs to finish up some responsibility or whose companies send them traveling for a week or two always find their course material waiting when they return. Another gratifying response has been that many students come in and complete their work before departing on a business trip. The course is a godsend to "trick-workers", who are regularly required to alternate

between morning and evening work shifts. Even if a student misses a periodic seminar, the flexibility of the course format allows for a tutorial to make up the class.

We believe that our students are also benefitted by the discovery that learning does not have to occur in a classroom, at an appointed time, with an authority-figure (the professor) present. The confidence and skills necessary to life-long learning are stimulated in a course of this sort.

Enrollment figures in "Modern America" provide some evidence of positive student attitudes. In its first four quarters, beginning with a pilot group of ten, enrollment in the course doubled each term. More than 500 students have now completed the course; and even with a major expansion of the library's Media Resource Center, the number of student requests for the course continues to exceed spaces available. In a technical-scientific institution and in a time when history enrollments generally have plummeted, it is gratifying to see overenrollment in an elective in the humanities.

Although designed for on-campus use by our own students, the course is capable of presentation to a wider audience. Beginning in September, 1976, media units will be broadcast over the Rochester public television station, WXXI, in weekend broadcasts. Through the efforts of the Rochester Area Colleges consortium, several area colleges will offer the course for credit. The emerging relationship with WXXI will test whether future attempts to provide televised instruction for adults at home will be practical.

Conclusion

In summary, through this paper, we have described the processes through which we have moved over several years in an attempt to make

what we teach as meaningful to students as it is to us. Finally, a generalization regarding the teaching/learning process can be derived from our work and is a confirmation of what we already know; the most important and personally rewarding part of a learning situation is sufficient contact between student and instructor. Given this, students and instructors will respond favorably towards new formats of instruction such as television. Without it, no form of instruction is adequate for human learning.

Notes

1. W. H. Schmidt and E. V. Svenson, "Methods in Adult Education," Handbook of Adult Education in the United States, ed. by Malcolm S. Knowles (Washington, D. C., 1960), p. 82.

2. D. J. Levinson, et al., "The Psychosocial Development of Men in Early Adulthood and the Mid-Life Transition," in Life History Research in Psychopathology, Vol. 3., ed. by D. F. Ricks, A. Thomas, M. Rooff (St. Paul, 1974), pp. 243-258.

3. R. L. Gould, "The Phase of Adult Life: A Study in Developmental Psychology," American Journal of Psychiatry, CXXIX (November, 1972), 521-531.

4. G. Sheehy, "Catch-30 and Other Predictable Crises of Growing Up Adult," New York Magazine, VII (February 18, 1974), 30-44.

5. E. Erickson, Insight and Responsibility (New York, 1964).

6. B. L. Neugarten, "A Developmental View of Adult Personality," in Relations of Development and Aging, ed. by J. Birren (Springfield, Ill., 1963) pp. 311-335.

7. C. G. Jung, Modern Man in Search of a Soul (New York, 1933).

8. B. F. Skinner, "The Science of Learning and the Art of Teaching," Harvard Educational Review, XXIV (Spring, 1954), 86-97.

9. P. L. Dressel and M. M. Thompson, Independent Study (San Francisco, 1973) pp. 8-11.

10. K. P. Cross, Accent on Learning (San Francisco, 1976) pp. 49-74.

11. G. Allport, "The Psychology of Participation," Psychological Review, LIII (May, 1945), 46-57.

12. See, for example, B. F. Skinner, "Teaching Machines," Science, CXXVIII (Winter, 1958), 969-977.

13. J. Par y, "Ability," in The Seven Stages of Man, ed. by R. R. Sears and . . S. Feldman (Los Altos, Cal., 1973), pp. 92-96.

14. R. M. Belbin, "Ability," in The Seven Stages of Man, ed. by R. R. Sears and S. S. Feldman (Los Altos, Cal., 1973), pp. 110-114.

15. S. Baskin, "Independent Study Methods, Programs, and for Whom?" in Current Issues in Higher Education, ed. by G. K. Smith (Washington, D. C., 1962) p. 52.

16. The Fourth Revolution: Instructional Technology in Higher Education, (New York, 1972), p. 1.

Notes

17. Robin Lanier, "A Home TV Revolution," New York Times Magazine (May 25, 1975), pp. 9, 43, 50-52; see also "The Videodisc Makes a Bid for Your Future," High Fidelity, XXV (June, 1975), 30; Norman Eisenberg, "Pictures You Can Play on a Turntable?" Stereo, VIII (Spring, 1975), 4.

18. Fourth Revolution, p. 12.

19. See an excellent summary in Wilbert J. McKeachie, Teaching Tips: A Guidebook for the Beginning College Teacher (6th ed., Lexington, Mass., 1969), pp. 99-112; see also Fourth Revolution, 13-14; Walter A. Wittich and Charles F. Schuller, Instructional Technology: Its Nature and Use (5th ed., New York, 1973), pp. 523-526.

20. McKeachie, Teaching Tips, p. 107; Fourth Revolution, p. 13n.

21. See J. R. Kidd, How Adults Learn (rev. ed., New York, 1973), pp. 36-38, 100-112.

22. A small quantity of relevant journal literature devoted to media and college-level history instruction has begun to emerge. Some of the best articles have appeared in The History Teacher and include Elizabeth York Enstam, "The Case for Electronic Media in College History Courses," VI (February, 1973), 191-200; James C. Curtis and Stanley Schwartz, "Learning History Through the Use of Media: An Experimental Approach," VI (August, 1973), 535-542; and R. C. Raack and Alan M. Smith, " The Documentary Film in History Teaching: An Experimental Course," VI (February, 1973), 281-294.

23. Complete copies of the course syllabus/workbook will be available at the conference for perusal.